

IN THE CLAIMS:

Please amend the claims as follows.

1. (Currently Amended) A flow sensor for measuring ~~[[the]]~~ a flow rate of a fluid, comprising:

a thin-film bridge unit supported in ~~[[the]]~~ air over ~~[[the]]~~ a surface of a substrate;  
a heater and a temperature measuring unit arranged on the bridge unit; and  
a memory device for storing ~~[[the]]~~ a relation between ~~[[the]]~~ a temperature measured by the temperature measuring unit and the flow rate of a fluid to be measured in ~~[[the]]~~ an initial state;

wherein ~~[[the]]~~ an output of the temperature measuring unit is corrected ~~by use of the~~ using a ratio of ~~[[the]]~~ a value of ~~[[the]]~~ temperature measured by the temperature measuring unit with ~~[[the]]~~ a flow rate of zero in the initial state to ~~[[the]]~~ a temperature measured by the temperature measuring unit with ~~[[the]]~~ a flow rate of zero during ~~[[the]]~~ operation, and the flow rate of the fluid is determined based on the ~~correction~~ corrected value of the output of the temperature measuring unit and the relation stored in the memory device.

2. (Currently Amended) The flow sensor according to claim 1,  
wherein the temperature measuring unit includes a first temperature measuring unit and a second temperature measuring unit, the ~~[[two]]~~ first and second temperature measuring units being arranged on the two sides of the heater, respectively, and the

correction is carried out based on [[the]] a temperature measured by at least one of the first and second temperature measuring units.

3. (Currently Amended) The flow sensor according to claim 1,  
wherein it is determined that the flow rate of the fluid is zero in [[the]] a case where a temperature lower than [[the]] a value of the measured temperature with the flow rate of zero in the initial state is measured by the temperature measuring unit, and [[the]] a prevailing temperature measured by the temperature measuring unit is regarded as the measured temperature with the flow rate of zero during [[the]] operation.

4. (Currently Amended) The flow sensor according to claim 1,  
wherein it is determined that the flow rate of the fluid is zero in [[the]] a case where a temperature lower than [[the]] a value of the measured temperature with the flow rate of zero during [[the]] operation is measured by the temperature measuring unit, and [[the]] a prevailing temperature measured by the temperature measuring unit is updated as the measured temperature with the flow rate of zero during [[the]] operation.

5. (Currently Amended) The flow sensor according to claim 1,  
wherein it is determined that the flow rate of the fluid is zero in [[the]] a case where [[the]] a temperature of [[the]] heat generated by the heater is substantially equal to [[the]] a temperature of [[the]] heat generated by the heater with [[the]] a flow rate of zero, and [[the]] a prevailing temperature measured by the temperature measuring unit is

regarded as a measured temperature with the flow rate of zero during [[the]] operation.

6. (Currently Amended) The flow sensor according to claim 2,  
wherein it is determined that the flow rate is zero in [[the]] a case where a  
temperature lower than the measured temperature with the flow rate of zero in the initial  
state is measured by each of the first and second temperature measuring units, and [[the]]  
a prevailing temperature measured by each of the first and second temperature measuring  
units is regarded as a measured temperature with the flow rate of zero during [[the]]  
operation.

7. (Currently Amended) The flow sensor according to claim 2,  
wherein it is determined that the flow rate of the fluid is zero in [[the]] a case  
where [[the]] a temperature measured by the first temperature measuring unit and [[the]]  
a temperature measured by the second temperature measuring unit become equal to each  
other, and [[the]] a prevailing temperature measured by each of the first and second  
temperature measuring units is regarded as a measured temperature with the flow rate of  
zero during [[the]] operation.

8. (Currently Amended) A method of measuring [[the]] a flow rate of a fluid  
using a heater for heat generation, a temperature measuring unit for measuring [[the]]  
ambient temperature changing with the flow rate of the fluid, and memory device for  
storing [[the]] a relation between the temperature measured by the temperature measuring

unit and the flow rate of the fluid to be measured in ~~[[the]]~~ an initial state,

wherein ~~[[the]]~~ a ratio of ~~[[the]]~~ a value of the temperature measured by the temperature measuring unit with ~~[[the]]~~ a flow rate of zero in the initial state to ~~[[the]]~~ a temperature measured by the temperature measuring unit with ~~[[the]]~~ a flow rate of zero during ~~[[the]]~~ operation is corrected by multiplying the ratio by ~~[[the]]~~ an output of the temperature measuring unit, and the flow rate of the fluid is determined based on the ~~correction~~ corrected value of the output of the temperature measuring unit and the relation stored in the memory device.